

REMARKS

Claims 1-9 are pending in the subject patent application. Of those claims, claim 5 is objected to as including an informality. In particular, the Examiner contends that claim 5 should depend from independent claim 2 instead of independent claim 1.

Independent claim 1 is rejected under 35 U.S.C. § 103(a) as being unpatentable over the combination of Ishi (U.S. 5,867,786) and Kobylinski et al. (U.S. 6,044,272) in view of Raith et al. (U.S. 6,028,854), further in view of IBM Technical Disclosure Bulletin (TDB-Acc-No. NN9108386) and Kangras et al. (U.S. Pub. No. 2002/0016172). Similarly, independent claim 2 and dependent claim 6 are rejected under 35 U.S.C. § 103(a) as being unpatentable over the combined teachings of Ishi and Raith et al. Dependent claims 3 and 7 are rejected under 35 U.S.C. § 103(a) as being unpatentable over Ishi in view of Raith et al., further in view of Kangras et al. Dependent claims 4 and 8 are rejected under 35 U.S.C. § 103(a) as being unpatentable over Ishi in view of Raith et al., further in view of Kobylinski et al. Lastly, dependent claims 5 and 9 are rejected under 35 U.S.C. § 103(a) as being unpatentable over the combination of Ishi and Raith et al. in view of Kobylinski et al., further in view of IBM Technical Disclosure Bulletin (TDB-Acc-No. NN9108386) and Kangras et al.

The foregoing rejections and objection are respectfully disagreed with, and are traversed below.

Regarding the Examiner's objection to claim 5, this claim has been amended to depend from independent claim 2 as suggested by the Examiner. It is noted, however, that by amending this claim to correct the afore-mentioned informality it is not admitted that the modification was required. Thus, as the amendment merely addresses an informality, this amendment was not made for a reason related to patentability and the full range of equivalents should remain intact.

Turning now to the rejections based upon art, it is respectfully asserted that the numerous cited references, whether viewed alone or in any combination, neither disclose nor suggest the present claims for at least the following reasons.

Independent claim 1 is directed to a method for making Enhanced Observed Time Difference (E-OTD) measurements with a mobile station. This method comprises:

receiving from a neighbor base station a Digital Traffic Channel (DTC) time slot that is on the same frequency with a desired Digital Control Channel (DCCH) that is to be measured;

detecting and decoding a Coded Digital Voice Color Code (CDVCC) in the DTC to obtain a DVCC;

verifying that the received signal is a correct signal for receiving a DCCH by comparing the received DVCC with a DVCC that forms a part of a base station neighbor list; and

measuring the E-OTD and associating the DVCC and channel number and hyperband information with the E-OTD measurement to obtain an E-OTD measurement report that is transmitted to a Serving Mobile Location Center (SLMC).

Similarly, independent claim 2 is directed to a method for making measurements of neighbor base stations with a mobile station. The method comprises:

receiving a measurement list of neighbor base stations, the list including information for identifying at least one neighbor base station that transmits a frequency channel to be measured;

tuning to a frequency channel transmitted by the neighbor base station, the frequency channel containing a control channel used for making a measurement;

verifying that the frequency channel is a correct frequency channel transmitted by the neighbor base station to be measured by receiving a traffic channel that is on the same frequency channel and extracting from the received traffic channel certain information that can be used to identify the base station that transmits the traffic channel;

comparing the extracted information with the information for identifying the neighbor base station that was received in the measurement list to ensure that the correct frequency channel is being received; and

associating the extracted information with the result of the measurement.

Independent claim 6 is directed to a mobile station comprising an RF transceiver having an RF transmitter and an RF receiver. The mobile station further comprises:

a controller coupled to the RF transceiver and being programmed for making measurement of neighbor base stations, said controller being programmed to (a) receive a measurement list of neighbor base stations from a serving base station, the list containing information for identifying at least one neighbor base station that transmits a frequency channel; (b) to tune said RF receiver to a frequency channel transmitted by the neighbor base station, the frequency channel containing a control channel used for making a measurement; (c) to verify that the frequency channel is a correct frequency channel transmitted by the neighbor base station to be measured by receiving a traffic channel that is on the same frequency channel and by extracting from the received traffic channel certain information that can be used to identify the base station that transmits the traffic channel; (d) to compare the extracted information with the information for identifying the at least one neighbor base station that was received in the measurement list to ensure that the correct frequency channel is being received; and (e) to associate the extracted information with the result of a measurement.

Claims 3-5 and 7-9 each depend from an independent claim and recited further advantageous features.

In contrast to the presently claimed invention, Ishi is directed to providing a system for monitoring carriers of peripheral zones which enables a mobile unit to perform channel switching or zone shifting free from the effect of interference or any transmission carrier from another grid of zones which may be deemed interference even if receiving the same at a high received field strength. In further accordance to Ishi, when a mobile unit monitors carriers sent from base stations in peripheral zones, it monitors the received carriers only when the received field strength of the transmission carrier is above a certain level and there is significant data sent on the transmission carrier. Thus, Ishi does not appear to relate to location measurement at

all. For instance, Ishi does not refer to location or OTD, but rather is directed to preventing erroneous channel switching.

The Kobylinski et al. reference relates to a system for effecting a mobile assisted handoff operation as the mobile station moves from one cell to another within a cellular communication network. Thus, Kobylinski et al. do not appear to relate to terminal location at all.

Raith et al. relate to radiocommunication systems and terminals with increased payload bandwidth. This reference further discloses a system for sending different kinds of data with different rates. As in the case of the above-cited references, Raith et al. do not appear to relate in any way to terminal location. Accordingly, it is asserted that one skilled in the art seeking to develop the presently claimed invention would not even be motivated to look to Ishi, Kobylinski et al. or Raith et al. for guidance.

Lastly, the IBM Technical Disclosure Bulletin and the Kangras et al. reference may relate to locating a terminal in a cellular system. However, the former discloses a system where base stations use coherent transmission and two signals have to be received simultaneously, in contrast to the claimed invention. The latter relates to enhancing the precision of E-OTD, but also fails to disclose or suggest all of the features of the claimed invention, whether viewed alone or in combination with any of the afore-cited references.

It is asserted that there is no teaching, suggestion or motivation that would lead one of ordinary skill in the art to combine and then modify the teachings of the afore-cited references in an attempt to arrive at the present claims. Without such a teaching, suggestion or motivation, the invention may only be considered obvious in hindsight, which is an improper basis for rejection.

In view of the foregoing, the Examiner is respectfully requested to reconsider and remove the outstanding rejections and objection. An early notification of the allowance of claims 1-9 is earnestly solicited.

Respectfully submitted:

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